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ABSTRACT

The purpose is to codify some program evaluation principles and provide a framework for program evaluation practices. Specifically: (1) common evaluation purposes are listed along with the general methods of investigation most apt for each purpose; (2) types of sources of evidence are listed and are associated with general methods of investigation; (3) types of administrative and fiscal relationships among program evaluator, program developer/director, and funding agent are delineated; (4) a checklist is provided of audiences for dissemination of results indicating appropriate communication forms for each audience; (5) value orientations of evaluators are defined and a means of communicating them to others is provided; (6) needed competencies of evaluators are listed as an aid to those evaluating and training evaluators; and (7) ethical responsiblities of evaluators and related groups are presented. (Author)

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PROFESSIONAL ISSUES IN THE EVALUATION OF EDUCATION/TRAINING PROGRAMS

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

The purpose is to codify some program evaluation principles and provide a framework for program evaluation practices. Specifically: a) common evaluation purposes are listed along with the general methods of investigation most apt for each purpose. b) types and sources of evidence are listed and are associated with general methods of investigation. c) types of administrative and fiscal relationships among program evaluator, program developer/director, and funding agent are delineated. d) a checklist is provided of audiences for dissemination of results indicating appropriate communication

(continued)

Abstract (continued)

forms for each audience. e) value orientations of evaluators are defined and a means of communicating them to others is provided. f) needed competencies of evaluators are listed as an aid to those evaluating and training evaluators. g) ethical responsibilities of evaluators and related groups are presented.

Professional Issues in the Evaluation of Education/Training Programs*

Program evaluation has been something of an outcast in social science research, despite attempts by Cronbach, Scriven, Stake, Suchman, and others to make it respectable. The relative lack of generalizability, apparent in most evaluations, but less apparent (although often as real) in other social science research may be one reason why program evaluation is held in low esteem. But it is not the whole story. For one thing, program evaluation has been given insufficient support and emphasis; for another, it has frequently been left to inadequately trained personnel to carry out. Many of those with the ability and scientific background to conduct competent evaluations have lacked either the interest or experience to make the contributions to the field that they were capable of.

In our view, the differences between research and evaluation are more differences of purpose and style than of great substance. To polarize the situation, some argue that research holds promise for future program development; evaluation assumes current or past program development.

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Research offers to extend our knowledge about abstract principles; evaluation offers to extend our knowledge about specific practices. Research provides generalizable knowledge without necessarily providing immediate payoff; evaluation provides immediate payoff without necessarily providing generalizable knowledge. Research is knowledge oriented; evaluation is decision oriented. However, such distinctions are frequently arbitrary and seldom sharp. A well-conceived evaluation study can yield information useful for improving a specific program and also contribute to our general knowledge about how people learn.

The purpose of this paper is to present a codification of some evaluation principles and a framework for appropriate evaluation practices. We hope this effort will enable both experienced and neophyte evaluators to understand their profession more comprehensively and practice it more systematically. The greater systemization suggested here may also help to combat some prejudices against program evaluation as a worthy activity for social scientists. Specifically, we shall try to:

- Delineate the most common purposes of evaluation efforts and indicate the general methods of investigation that are most apt for each purpose (Table 1).
- Highlight some of the types and sources of evidence frequently associated with the general methods of investigation (Table 2).
- Classify the types of administrative and fiscal relationships that may exist among the evaluator, the funding source, and the program developer/director (Table 3).

. Provide a checklist of potential audiences for evaluation results, indicating the most appropriate communication forms for each audience group (Table 4).

. Suggest a means for defining and communicating some typical ideologies and value orientations of evaluators (Table 5).

. Provide a comprehensive list of competencies which evaluators need to varying degrees, as an aid to evaluating and training evaluators (Table 6).

. Outline the ethical responsibilities of evaluators and related groups (Table 7).

The tables referred to above are the heart of this presentation and should be studied in some detail.

1. Evaluation Purposes and Methods

Evaluations are undertaken for a great many reasons or purposes. These mandate areas of involvement for the evaluator attempting to provide relevant information for decision making. We have distinguished six major purposes or areas of involvement, and each of these six have been broken down into a number of components, as shown in Table 1.* Table 1 also includes a matching of evaluation purposes-components to likely general methods of investigation. Let us examine each of the six major evaluation purposes in turn.

I. To contribute to decisions about program installation. Historically the evaluation process has been thought of as beginning after the decision to implement an education/training program. However, a number of the

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* The content of this list of evaluation purposes benefitted from Scriven's (1974) "Product Checklist." It should be noted, however, that Scriven's list is designed to be used primarily for appraising completed educational products or evaluation proposals, while Table 1 is intended as an aid to overall evaluation planning.

Table 1
Purpose and General Methods of Program Evaluation

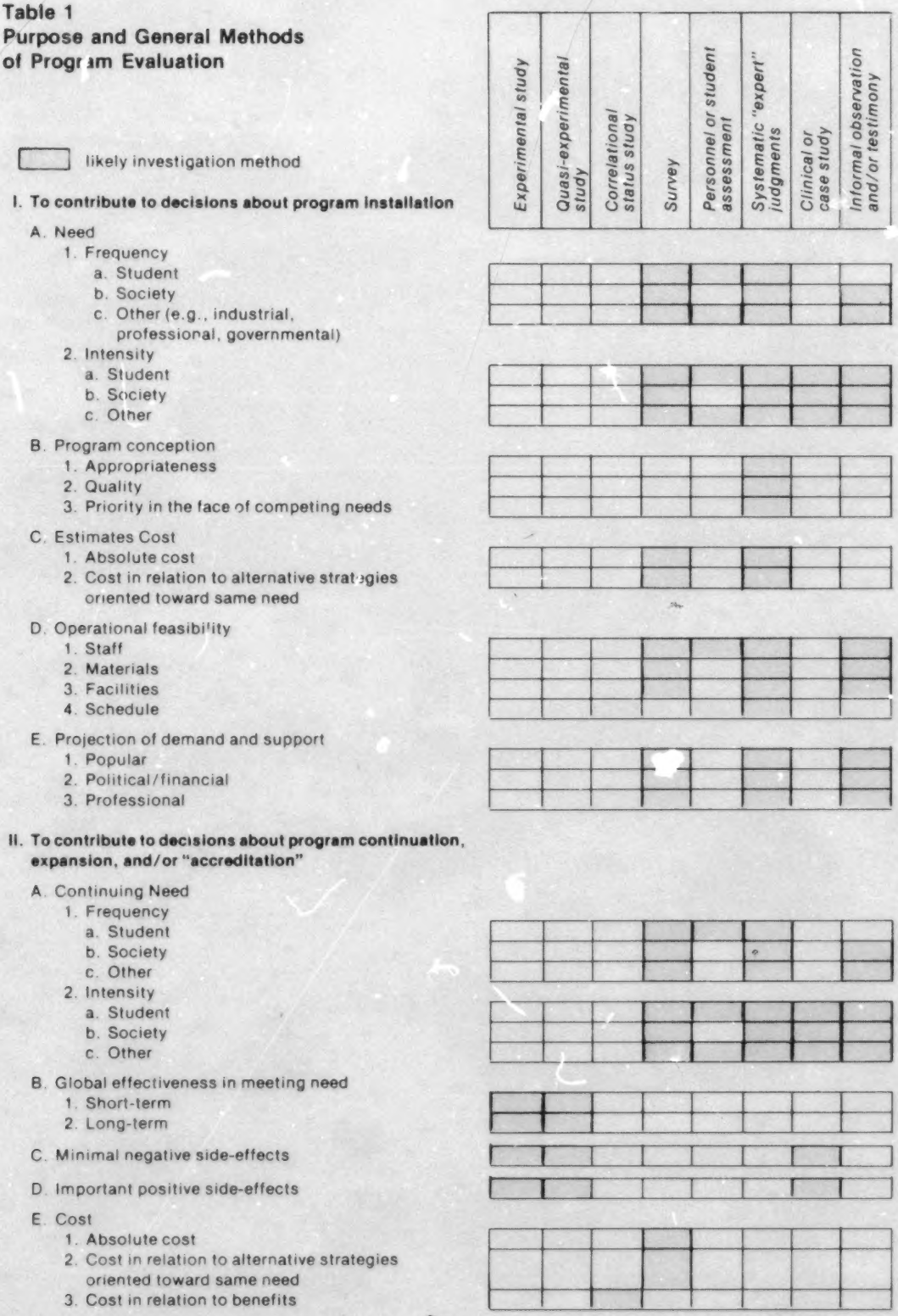
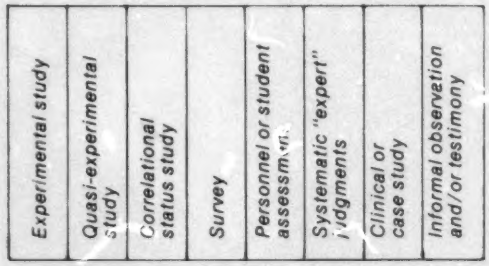


Table 1 (continued)



F. Demand and support
   1. Popular
   2. Political/financial
   3. Professional

III. To contribute to decisions about program modification

A. Program objectives
   1. Validity and utility (in meeting needs)
   2. Popular acceptance
   3. Professional acceptance
   4. Student acceptance
   5. Instructor acceptance

B. Curriculum content
   1. Relevance to program objectives
   2. Coverage of objectives
   3. Technical accuracy
   4. Degree of structure
   5. Relevance to backgrounds of students
   6. Effectiveness of components
   7. Sequencing of component
   8. Difficulty
   9. Popular acceptance
   10. Professional acceptance
   11. Student acceptance
   12. Instructor acceptance

C. Instructional methodology
   1. Degree of student autonomy
   2. Effectiveness of presentation methods
   3. Pacing and length
   4. Reinforcement system
   5. Student acceptance
   6. Instructor acceptance

D. Program context
   1. Administrative structure, auspices
   2. Program administration procedures
   3. Staff roles and relationships
   4. Public relations efforts
   5. Physical facilities and plant
   6. Fiscal sources and stability
   7. Fiscal administration procedures

E. Personnel policies and practices
   1. Students
      a. Recruitment
      b. Selection and placement
      c. Evaluation
      d. Discipline
      e. Retention
   2. Instructors
      a. Selection and placement
      b. In-service training
      c. Evaluation for promotion, guidance, retention, etc.

Table 1 (continued)

	Experimental study	Quasi-experimental study	Correlational status study	Survey	Personnel or student assessment	Systematic "expert" judgments	Clinical or case study	Informal observation and/or testimony
3. Administrators								
a. Selection			■		■	■		
b. Evaluation for promotion, retention, etc.			■			■		
IV. To obtain evidence favoring program to rally support								
A. Popular	■	■		■	■	■		■
B. Political/financial	■	■		■	■	■		
C. Professional	■	■				■		
V. To obtain evidence against program to rally opposition								
A. Popular	■	■		■	■	■		■
B. Political/financial	■	■		■	■	■		
C. Professional	■	■				■		
VI. To contribute to the understanding of basic processes								
A. Educational	■	■	■					
B. Psychological	■	■	■				■	
C. Social	■	■	■				■	
D. Economic	■	■	■					
E. Evaluation (Methodology)	■	■		■	■	■	■	■

skills and techniques usually associated with evaluation of existing or planned programs are applicable to what Harless (1973) has called "Front-end analysis." Assessment of the frequency and/or intensity of needs for a program, evaluation of the initial conception, and estimates of costs, operational feasibility, and demand and support are all important precursors to decisions about whether to implement a program and about the size and scope of the installation.

II. To contribute to decisions about program continuation, expansion (or contraction), and/or "accreditation." This purpose is the one usually served by what is popularly called "summative evaluation"; however, more is included here than is sometimes intended by that term. For example, investigations under Purpose II may involve some of the same components as investigations under Purpose I; after a program is in operation, it is important to monitor the continuing needs for the program (some of them may change or even go away) and to assess actual costs and demand/support. Results of these investigations need to be considered along with results of impact studies (focusing on both intended and unintended outcomes) in making decisions about program continuation, expansion, or "accreditation."

III. To contribute to decisions about program modification. This purpose corresponds to the one usually ascribed to formative evaluation, although information about program components can also be obtained after a program is in full operation and in the context of a global appraisal of effectiveness. Of course, if a program is cast in an unchangeable mold,

the evaluator is wasting his time seeking information to help make it better. A major distinction between evaluation efforts devoted to Purpose III, as opposed to Purpose II, is in the emphasis on describing program processes in contrast to program products. As Table 1 indicates, the evaluator may seek information to guide program improvement in a broad range of areas, including program objectives (e.g., validity and utility in meeting needs, popular acceptance), curriculum content (e.g., relevance to objectives, technical accuracy), instructional methodology (e.g., degree of student autonomy, pacing), program context (e.g., administrative structure, staff roles), and personnel policies and practices (e.g., student recruitment, instructor selection).

IV. and V. To obtain evidence favoring a program to rally support or To obtain evidence against a program to rally opposition. These two purposes are presented in recognition of the realities of program evaluation. Many evaluators shun evaluations with these purposes; many people who "commission" evaluations are unwilling to admit to their real motives. But there are indeed occasions when decision makers must rally support for a program in order to sustain it, or opposition to it in order to "kill it" so that funds can be diverted to other things. And there may be occasions when decision makers are willing to entertain both negative and positive evidence about the effectiveness of a program. The adversary model of evaluation integrates this purpose with the full thrust of the evaluation effort (Churchman, 1961; Stake & Gjerde, 1971; Levine, 1973). In any case, it is better if the evaluator's client faces up to the real reasons for the evaluation and does not keep them hidden from the evaluator. The evaluator's responsibilities, in turn, include defining clearly the nature of the evidence being presented, indicating its lack

of representativeness if that is indeed the case, and ensuring the validity of the evidence even if it is only a partial picture of the total state of affairs.

VI. To contribute to the understanding of basic processes. Pursuing the purposes of a decision-oriented evaluation does not preclude investigating, within the context of the same study, basic processes in at least one of the disciplines listed under Purpose VI, Table 1. However, evaluators cannot afford to lose sight of the fact that the program must be the central focus. A search for understanding of basic processes can be a means to sharpen the focus of the investigation.

We have pointed out that Table 1 includes a conjunction of evaluation purposes and general methods of investigation. Eight general investigatory methods are listed: experimental studies, quasi-experimental studies (including studies where correlations/predictions serve as dependent variables, as well as the more usual means), correlational status studies (where no available manipulation occurs at all, and the data to be correlated are generally collected concurrently), surveys (e.g., of attitudes toward the program, records of program operations), personnel or student assessments (using tests and other measurement devices with the staff or students involved), systematic "expert" judgments (e.g., ratings), clinical or case studies (focusing on particular students, subgroups of students, program components, etc.), and informal observation and/or testimony. We should remind ourselves that the last method was the most prevalent form of program evaluation until very recently. How many of the textbooks that we used were adopted on the basis of anything other than testimony?

In Table 1, we have indicated, for example, that the most likely methods to be used to assess the frequency of student needs (see I.A) are surveys, student assessments, and systematic "expert" judgments. If we were investigating the intensity of student needs, we might very well also accept data from case studies and testimony. (The urgency for a remedial reading program for a large number of 8th graders reading at 6th-grade level would be very different from the urgency for a program to help the handful reading at 2nd-grade level.) It will be noted in Table 1 that every time an evaluation purpose calls for an estimate of program or component effectiveness (e.g., II.B, III.C.2), an experimental or quasi-experimental study is suggested as the most likely (and appropriate) method of investigation. The relationship of the general methods to Purposes IV and V has a slightly different meaning from relationships to the other purposes. Here we must ask: What kind of evidence is most likely to rally support for (or opposition to) the program? We suggest that a professional audience would be less swayed by survey or assessment data than a lay audience would be, but that the public would join professionals in respecting relatively "hard" evidence.

No claim is made that our designations of likely methods of investigation for particular evaluation purposes and objects are comprehensive or definitive. However, the evaluator and the administrator calling for an evaluation might well use Table 1 in the planning effort, for it at least provides a systematic way of considering the variety of purposes an evaluation might serve and the variables on which it might focus, as well as the general investigatory methods that might be employed to obtain information relevant to these purposes and variables.

2. Types and Sources of Evidence Frequently Associated with General Methods of Investigation

Table 2 provides a second cross-tabulation. On one axis are the eight general methods of investigation initially presented in Table 1. Each of these eight methods has been augmented by examples of the types of evidence frequently offered by investigators using the general method. Thus the Survey method (IV) has as examples: A. Projections of manpower needs; B. Summaries of attitudes/opinions about the ongoing program expressed by students, instructors, others; and C. Descriptions of program characteristics, operations, costs.

On the other axis are ten sources of evidence. These sources are not necessarily independent. For example, "Expert opinion" might be obtained via "Questionnaire or interview," and "Social indicators" might be obtained through "Records." We have deliberately allowed some confounding here of kind of evidence and technique used for gathering it, in order to use terms which we hoped would best communicate the essence of the sources of evidence to evaluators and program directors.

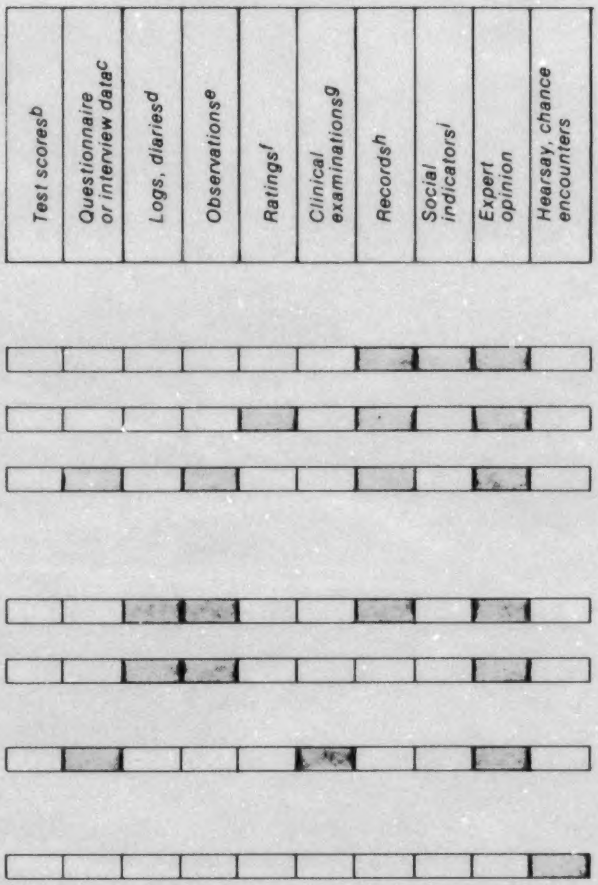
Within the cross-tabulation we have associated relevant sources of evidence with types of evidence typically presented under the different general methods of investigation. The associations provide our informal definition of "appropriate" sources of data for various types of evidence. However, they are meant to be suggestive, rather than prescriptive. From Table 2 it can be seen, for example, that we suggest that an investigator presenting correlations among student measures (III.D) might include the following in his matrix: test scores, data derived from questionnaires questionnaires or interviews, grades (ratings), and/or results from clinical examinations. Or, an investigator conducting a case study

Table 2
Examples and Types of Sources of Evidence Frequently Associated with the Various General Methods of Investigation[a]

Likely source of evidence

	Test scores[b]	Questionnaire or interview data[c]	Logs, diaries[d]	Observations[e]	Ratings[f]	Clinical examinations[g]	Records[h]	Social indicators[i]	Expert opinion	Hearsay, chance encounters
I. Experimental study										
A. Differences between performance of students in the program and performance of other students	■			■	■	■				
B. Differences between performance of students exposed to program variations	■			■	■	■				
C. Data on differential program effects for students with different characteristics	■	■		■	■	■				
II. Quasi-experimental study										
A. Changes in student performance over the time of exposure to the program	■			■	■	■				
B. Changes in student performance for different program components, variations	■			■	■	■				
C. Differential predictions of "success" for students exposed and not exposed to the program	■				■		■			
III. Correlational status study										
A. Correlations between program characteristics (sometimes including costs) and student performance	■	■		■	■		■			
B. Correlations between student characteristics (such as race, sex) and student performance	■				■		■			
C. Correlations among program characteristics		■	■	■			■			
D. Correlations among student measures		■			■	■	■			
IV. Survey										
A. Projections of manpower needs		■						■	■	
B. Summaries of attitudes/opinions about the ongoing program expressed by students, instructors, others		■	■							
C. Descriptions of program characteristics, operations, costs			■	■			■			
V. Personnel or student assessment										
A. Profiles of characteristics of entering, leaving, past, or prospective students	■	■			■		■			
B. Summary descriptions of characteristics of program personnel	■	■			■		■			

Table 2 (continued)


Test scores[b]
Questionnaire or interview data[c]
Logs, diaries[d]
Observations[e]
Ratings[f]
Clinical examinations[g]
Records[h]
Social indicators[i]
Expert opinion
Hearsay, chance encounters
VI. Systematic "expert" judgment
A. Recommendations by a commission appointed to delineate a problem and recommend possible solutions
B. Report of curriculum/materials review or evaluation panel
C. Report of site visit to the program by a team of outside experts
VII. Clinical or case study
A. Analysis of program processes (implementation, management, evolution, etc.)
B. Phenomenological analysis of institutional change
C. Summary of impressions gained from examination of special student or personnel groups (e.g., referrals)
VIII. Informal observation and/or testimony
A. Anecdotes about experiences of particular students, instructors, etc.

[a]See also "Table 1, Data Sources for Evaluation Efforts," in Anderson et al. (1975), *Encyclopedia of Educational Evaluation*, p. 116. Reference is also made (below) to *Encylopedia* pages for more complete definitions of many of the sources of evidence.

[b]Tests include paper-and-pencil, situational, and performance tasks. See pp. 425-428.

[c]See pp. 214-217, 311-314.

[d]Kept by participants during the course of the program.

[e]See pp. 266-270.

[f]Including grades, supervisors' ratings, expert opinions in the form of ratings. Questionnaires and ratings are not mutually exclusive; questionnaires might include ratings as well as other types of information. See pp. 315-318.

[g]Including physiological, psychological, and psychiatric appraisals.

[h]Including personnel records, publications, financial data, program materials.

[i]Census data, crime rates, etc. See pp. 374-377.

oriented toward a phenomenological analysis of institutional change (VII.B) might utilize information derived from logs and diaries, observations, and expert opinion.

Table 2 may be useful to evaluators or persons commissioning or monitoring evaluations to give more definition to the general methods of investigation listed in Table 1, to remind them of the variety of sources of evidence that might be used in a particular study, and to focus attention on possible dissonances between types of evidence and the sources of information on which they are based.

3. Administrative and Fiscal Dependence-Independence of the Evaluator

To this point we have presented a framework for selecting a set of evaluation purposes and general methods of investigation, as well as examples of types and sources of evidence. The processes of selecting goals, methods, etc., occur within a political-economic context that is frequently ignored in the evaluation literature but which, nevertheless, can exert a profound influence on the evaluation.

The principal actors in the scene are the funding agent(s), the program director/developer, and the evaluator. Of course, choruses can substitute for one or more of the actors (e.g., a funding consortium, a program development committee). Of most concern here is the position of the evaluator, who can be dependent upon, related to, or independent of the other actors.

"Dependency" has two aspects: administrative and financial. The evaluator is administratively dependent upon the program director when he is required to report to the program director in some institutionalized

way. He is financially dependent on the program director when the program director controls the funds available for the evaluation. The evaluator is administratively independent when he reports to an external authority and financially independent when funds for the evaluation are allocated directly to him by an agency that has no other connection with the program.

"Relatedness" occurs either when the evaluator and program director report to the same administrative authority (e.g., a board of education, company vice president, or economic development council) or when funds for program operation/development and for the evaluation stem from the same agency (e.g., a foundation or government source).

These relationships are graphically represented in Table 3 and are determined by the answers to two simple questions:

1. Who does the evaluator report to?
   - The program director (administratively dependent)
   - The same authority as the program director (administratively related)
   - An independent authority (administratively independent)
2. Where do the funds for the evaluation come from?
   - The program director (financially dependent)
   - The same funding source as the program (financially related)
   - An independent funding source (financially independent)

On the surface, it might seem that the more independent the evaluator, the better the evaluation. Further consideration does not necessarily provide support for that generalization. There are advantages and disadvantages in the different categories of relationship, complicated in

Table 3

Dependence-Independence of the Evaluator

	Financially Dependent	Financially Related	Financially Independent
Administratively Dependent			
Administratively Related			
Administratively Independent			

some instances by an interaction between the purpose of the evaluation and the kind of relationship that is desirable. Dependent relationships may promote responsivity by the evaluator to particular program needs. This can be worthwhile when the purpose of the evaluation is to improve the program (formative evaluation). However, dependence can be counterproductive when the purpose of the evaluation is to provide a credible, global assessment of the program's impact (Scriven, 1967). Skeptics will certainly question evaluation results produced by a "captive" evaluator.

There are instances when it would seem very desirable for the agency that funds the program also to fund the evaluation. Indeed, this has frequently been the case with large federally funded intervention programs or major curriculum projects funded by foundations. Again, the advantage is responsivity by the evaluator, this time to the expectations of the funding agency. However, even the judgments of such agencies can become warped. Having committed themselves heavily to a new program, they may become increasingly reluctant to hear anything negative about it. They may even reach the point that they tend to fault the evaluator rather than the program, a reaction akin to the ancient custom of beheading the bearer of bad news.

Just as there are problems in dependence and problems in relatedness, there are also problems in independence. This is vouched for empirically by Bernstein and Freeman (1975), who found that the quality of evaluation studies (as measured by expert judgments) decreased as the independence of the evaluation effort increased. Independence can also be related to potential impact of evaluation results. At the extreme, evaluations

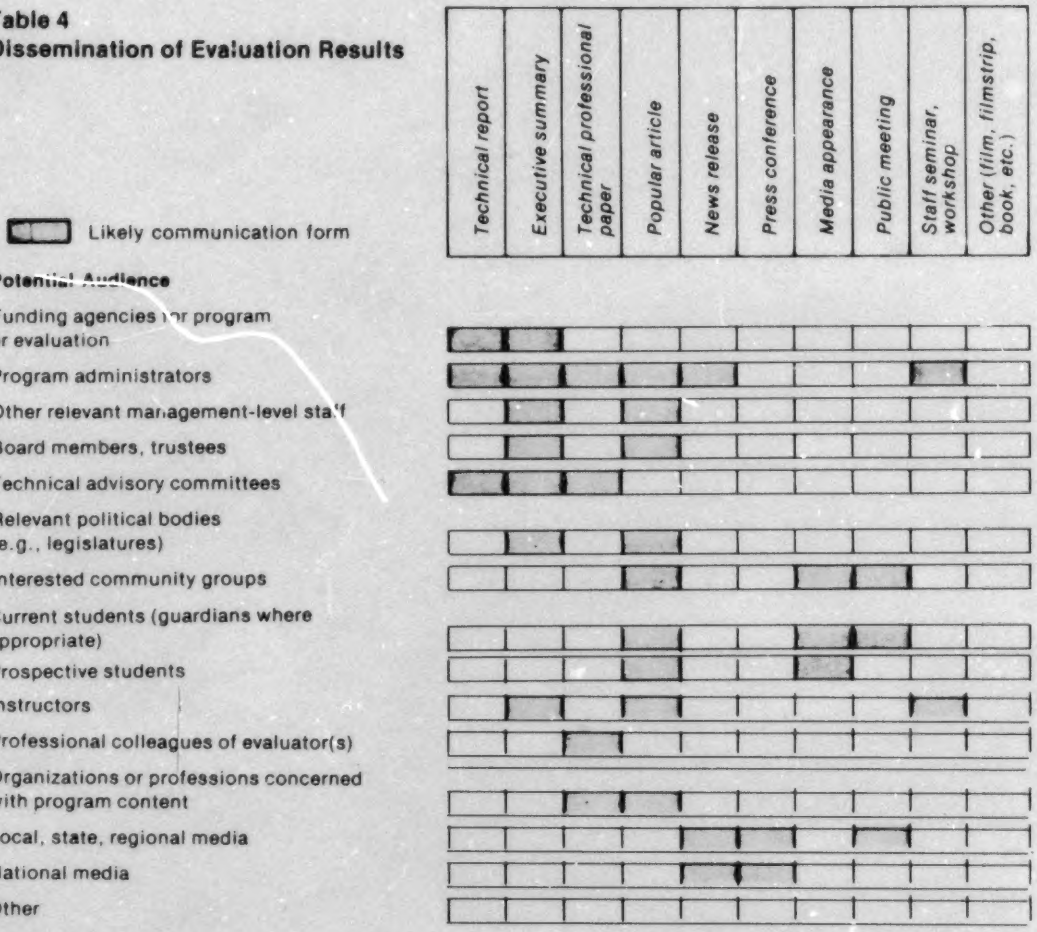
might be so independent that results would have no bearing on the decision needs of program directors or, worse, produce valuable information that never reached program directors.

It is impossible to specify the kind of administrative-financial relationships among the evaluator, program director, and funding agent that would be universally satisfactory. What can be specified, however, is the nature of the relationships among the parties at the outset of any particular evaluation; and many potential problems can be dissipated by an understanding of and continuing commitment to the stipulated relationships. In case of serious violations or disagreements, the possibility of some external body to whom the evaluator might turn is exciting. Professional organizations concerned with program evaluation might well consider whether such a tribunal is practical at this time.

4. Dissemination of Evaluation Results

Let us assume that the purposes of the evaluation were justifiable, that the methods of investigation and resulting evidence were responsive to the purposes, and that the evaluation processes were carried out in a supportive milieu (rather than one that was politically contentious and/or economically impoverished). The evaluator has almost finished the task, but not quite. It is time now to disseminate the results of the evaluation. The first premise is that if the evaluation was worth doing, there are groups who have some interests--perhaps strong ones--in the findings. Responsible--or responsive--evaluations include analyses of these audiences and inquiries into the kinds of evidence they would honor early on in the process (Stake, 1975, p. 29).

Table 4
Dissemination of Evaluation Results



Unfortunately the typical dissemination procedure seems to be to provide some thirty copies of a technical evaluation report (bound in a nondescript cover) to gather dust on the shelves of the funding agency. This is ecologically wasteful if nothing else. Of course written technical reports have their place, but evaluation dissemination is too important a part of the evaluation process--as feedback is to the learning process--to be treated thoughtlessly.

In Table 4 we present nine ways of communicating (disseminating) evaluation results. The choice of the form of communication has to be made in terms of the likely audience for that communication. We have listed fourteen potential audiences as a cross-tabulation for the nine communication forms, and we also suggest the most appropriate forms for each possible audience. For example, the funding agency should certainly be given the technical report and the executive summary (a short, intelligible presentation of the principal findings, with a minimum of jargon). Relevant political groups should receive the executive summary and any popular articles based on the evaluation. Local, state, or regional media will usually not be interested in technical reports but may be interested in receiving news releases, attending press conferences, or covering public meetings.

There are two reasons for including Table 4 in this report: to suggest what communication forms are most appropriate for specific audiences and, more important, to emphasize the need for evaluators to make a conscious listing of potential audiences for their results and to broader their consideration of useful forms of communication.

5. Values in Evaluation

There is considerable argument about the role that the investigator's values can and should play in scientific enterprises, with many people maintaining that a neutral stance is essential for any scientific endeavor. Such arguments frequently fail to distinguish between professional and personal values. For example, an investigation of physical phenomena may be carried out without any overriding concern for what the physicist considers useful to the community--a personal value. However, it is virtually impossible to dissociate the investigator's professional-scientific values from either the phenomena he or she chooses to study or the methods employed in the investigation.

The same is certainly true of the evaluator of an education/training program. We know that the professional values he holds, based in large part on the type of training he has had and the evaluation "model" he prefers, influence the choice of evaluation design, measurement techniques, methods of analysis, and ways in which the data are interpreted. Even more critical are the personal values the evaluator places on the program to be evaluated. If he is all "for" early education or prevention of drop out or teaching computer programming, we might suspect that his evaluations of programs with those contents would be different from those of a more skeptical evaluator. Furthermore, it is possible that the personal values he places on the program may <u>interact</u> with his professional values to influence design, measurement, analysis, and interpretation decisions.

We are inclined to believe that there is no way to remove the evaluator's values from the evaluation process. After all, the word "evaluation" presents the centrality of values quite literally. Nor are we convinced that a

value-free stance would necessarily be desirable if it were attainable. However, there does seem to be a need for evaluators to attempt to make their value orientations as specific as possible both before they undertake an evaluation and in the processes of carrying it out and reporting the results. Unfortunately, evaluators have had few pressures from their clients or potential clients to make their values explicit and little commitment to analyzing those values for their own self-understanding. They have also lacked a convenient means for doing so.

Table 5 presents a preliminary scheme by which evaluators might examine their professional predispositions and preferences. (It does not pretend to deal with the issue of personal attitudes toward the objectives, content, or operation of specific programs the evaluator might be called upon to appraise.) An attempt has been made to describe seven dimensions that seem to be central to the evaluator's professional values and that are not necessarily highly correlated. The descriptions take the form of labels (e.g., Absolutist-Comparative) and examples of the kinds of design, measurement, analysis, and/or interpretation preferences that might be associated with the extremes of the dimensions (e.g., within-group analysis vs. between-group analysis). The examples might also be thought of as "symptoms"--if an evaluator tends to prefer clinical or case studies to experimental or quasi-experimental designs, he is more likely to be Phenomenological than Behavioristic. (It should go without saying that there is no intent here to attach value judgments to the dimensions themselves; Phenomenological is not "good" and Behavioristic "bad" or vice versa.)

Consider an example: One evaluator might characterize herself as leaning more toward Behavioristic (than Phenomenological), Comparative

Table 5

Predispositions and Preferences of Evaluators

(Including Examples of Design, Measurement, Analysis, and Interpretation Preferences Associated with the Principal Dimensions)

	PHENOMENOLOGICAL	BEHAVIORISTIC
Design	Clinical or case study	Experimental or quasi-experimental design
Measurement	Subjective measurement methods, content analyses, self-reports	Objective measurement methods, tests, systematic observations
Analysis	Descriptive statistics and nonparamatric techniques	Inferential statistics
Interpretation	Judgmental, value-laden	Nonjudgmental

	ABSOLUTIST	COMPARATIVE
Design	One-group design	Experimental or quasi-experimental design with comparison group(s)
Analysis	Within-group analysis	Between-group analysis
Interpretation	Standard-referenced	Comparison-group - referenced

	INDEPENDENT	DEPENDENT
Measurement	Goal-free measures	Measures tailored to program goals
Interpretation	Nonclient-oriented	Goal-referenced, client-oriented

	PRAGMATIC	THEORETICAL
Design	Widely varying	Experimental or quasi-experimental design (hypothesis testing)
Measurement	Ad hoc measures, records	Established measures, construct validity emphasized
Analysis	Widely varying	Inferential statistics
Interpretation	Program-specific conclusions, little generalization (ideographic)	Hypothesis confirmation, generalization (nomothetic)

	NARROW SCOPE	BROAD SCOPE
Measurement	Few and specific measures	Many and global measures
Analysis	Univariate contrasts	Multivariate analyses
Interpretation	Oriented toward component functioning	Oriented toward system functioning

Table 5 (Continued)

	HIGH INTENSIVE	LOW INTENSIVE
Design	Repeated measurement occasions (longitudinal)	Infrequent measurement occasions (perhaps cross-sectional)
Measurement	Multi-trait, multi-method (triangulation)	Survey tests
Analysis	Multivariate analyses, including factor analyses	Univariate analyses, descriptive statistics
Interpretation	Generalization	Description

	PROCESS	PRODUCT
Design	Repeated measurement occasions	Experimental or quasi-experimental design, infrequent measurement occasions
Measurement	Observations, logs, interviews	Tests
Analysis	Descriptive statistics	Inferential statistics
Interpretation	Recommendations for program improvement	Recommendations for program continuation, expansion, "accreditation"

(than Absolutist), Independent (than Dependent), Pragmatic (than Theoretical), Broad Scope (than Narrow Scope), High Intensive (than Low Intensive), and Process (than Product). Another evaluator might characterize himself as different on two of these dimensions, describing himself as more Dependent and Narrow Scope. Other things being equal, we would expect the second evaluator to develop an evaluation plan different from the first evaluator's, with measures tailored more specifically to the program or client's goals, fewer and less global measures, and relatively more emphasis on the functioning of program components.*

As matters currently stand, evaluation critics point out that the conclusions of two evaluations of the same program could easily bear little resemblance to one another simply because they were conducted by different evaluators (see Shapiro, 1973). Use of a scheme such as that provided in Table 5 may contribute to explicit predictions of such outcomes on the basis of evaluators' predispositions and preferences; e.g., an evaluator most concerned with process and an evaluator with a product orientation might give very different reports on a program. In any case, it should be a salutary experience for evaluators to attempt to analyze their own professional values and disentangle them from their conclusions.

6. Professional Competencies of the Evaluator

The training of program evaluators is an educational enterprise of rather recent vintage. Until the past few years evaluators were drawn into the profession by the work to be done--or by the lack of work in related social science fields. Psychologists, educators, sociologists, economists, and anthropologists have all done a stint in the field. Some have written

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*We hope to develop the "scales" in Table 5 further and investigate their psychometric properties. Comments or reports by those who try to use Table 5 (or some variant) would be very useful.

a critical note here or a how-to-do-it chapter there and then returned to the haven of their basic discipline. Others have stayed, some to try to invent new programs to train evaluators.

The nature of these inventions varies from those designed to train evaluators directly to those designed to train them inductively--or by osmosis. Some department chairmen insist on a substantive major (e.g., social psychology) with a program evaluation minor. Many insist that future evaluators at least need a thorough grounding in "basics" before they get into applications. Definitions of "basics" vary, but frequently include such areas as experimental design, survey techniques, and educational philosophy. There are others who think that training in educational research and measurement per se qualifies a program evaluator. There is disagreement too about the degree to which some of the popular terms in the field represent "jargon" as opposed to real substance that future evaluators need to become thoroughly acquainted with. Some of the "models" of evaluation are cited as examples; e.g., "CIPP," "Discrepancy," "Goal-free"--see Stufflebeam et al. (1971), Provus (1971), and Scriven (1972), respectively. Part of the confusion centers around people's perception of evaluation as a discipline or a profession, as opposed to a job. The latter perception is associated with an anti-formal-training bias and advocacy of "internship" or "in-service" experiences.

As this article suggests, we are inclined toward the discipline or profession point of view. However, we do not believe that the etiology of the evaluator's skills is of paramount importance. What is important is that those skills exist. An evaluator may have the necessary skills

and knowledge personally, or he may have sufficient sense to obtain technical consultation in areas where he is deficient. Either way is acceptable, although we would feel more comfortable if a person with major evaluation responsibilities had to obtain technical consultations only occasionally. (Consider, as an analogy, the level of skill you would prefer in your medical doctor.)

Of course, it is possible to have necessary skills for evaluation without much practical experience. Again, however, we would feel more comfortable entrusting major responsibility for an evaluation to someone who has had some practice. (Return again to the medical analogy and consider your selection of the surgeon who is to operate on you.)

At the top of Table 6 is a fourfold scheme to aid in assessing an evaluator's competencies. Clearly the highest "score" (see the cell marked 4) would be earned by an experienced evaluator with need for only minimal technical consultation. The least competent level is represented by the cell marked 1 and defines an inexperienced evaluator with considerable need for technical consultation. Somewhere between these extremes are the other two cells. Their ordering would probably depend on situational factors.

The cells are placeholders for the content and skill areas listed below them in Table 6. The listing is an eclectic one, derived from the panel meeting mentioned in the first footnote of this article and a variety of other sources, and covers considerable ground. It could serve as the basis for a full program of graduate studies. In practice, we would not expect any single evaluator to obtain a "score" of 4 as each area is substituted in the matrix. However, we hope that evaluators,

Table 6

Professional Competencies of the Evaluator

Evaluation of Competencies:

Knowledge or skill sufficient to select appropriate model(s) and techniques, and to design and implement evaluation

	with technical consultation	with minimal technical consultation
Minimum or no field experience	1 - Lowest Competence	
Relevant successful field experience		4 - Highest Competence

Content Areas:

Experimental design
Quasi-experimental design
Survey methods
Sampling
Case-study methodology
Field operations
Legal and professional standards for empirical studies
Techniques of setting goals and performance standards
Job analysis
Alternative models for program evaluation
Major literature and reference sources useful for evaluators
Methods of controlling quality of data collection and analysis
Data preparation and reduction
Applications of observation techniques, unobtrusive measures
Applications of interviews, questionnaires, ratings
Applications of tests (paper-and-pencil, situational, performance, etc.)
Content analysis
Psychometrics (reliability, validity, scaling, equating, etc.)
Reactive concerns in measurement and evaluation
Descriptive statistics
Inferential statistics
Statistical analysis
Correlation and regression methods
Cost-benefits analysis
Contracts and proposals
Major constructs in education and the social sciences

Special Skills and Sensitivities:

Management skills
Public relations skills
Interpersonal skills
Expository skills (speaking and writing)
Professional and ethical sensitivity
Sensitivity to concerns of all interested parties

evaluators-in-training, and those who train evaluators will be able to use the list (or a modified version) to check their training programs and personal competencies. In addition, the list should offer those who employ evaluators and commission evaluation efforts guidance about some of the knowledges and skills they might look for in potential evaluators.

7. Ethical Responsibilities of the Evaluator and Others Involved in Program Evaluation

If there is a more neglected issue in program evaluation than this one, it has been so neglected as to be no longer discernible. The evaluator works in a value-laden, often politically volatile, pressureful area. His conclusions have potential power: large-scale programs can be terminated, program components can be given greater emphasis, reputations and careers can be made or broken. Yet in this highly charged setting there are no credos for the evaluator, no statements of responsibilities for the various actors in the evaluation process, and few agreed-upon standards of professional behavior.

With some diffidence we present Table 7. A statement of ethical responsibilities should come--and eventually has to come--from one or more of the professional organizations to which evaluators belong. But professional organizations are usually conservative and their committees may move slowly, even when the need is great. We hope that the statements presented in Table 7 will serve as an interim guide to ethical behavior in the evaluation area and a starting point for subsequent standard-setting activities by appropriate societies.

Table 7

Ethical Responsibilities in Program Evaluation*

Evaluator to Client, Participants, Public, and Profession	Client, Participants, and Secondary Evaluator to Evaluator
1. To acquaint the potential client with those values and orientations of the evaluator that may bear on the proposed evaluation effort.	Client: To provide the potential evaluator with as full information as possible about the program, the client's expectations for the evaluation, and the proposed conditions and resources for carrying it out.
2. To work toward a contract or "agreement" with the client that is ethically, legally, and professionally sound.	Client: To work toward a contract or "agreement" with the evaluator that is ethically, legally, and professionally sound.
3. To refuse to perform work until such a contract or "agreement" is reached.	Client: To refrain from insisting that work be performed before such an "agreement" is reached.
4. To fulfill the terms of the contract or "agreement" to the best of the evaluator's ability.	Client: To cooperate with the evaluator and to fulfill to the best of the client's ability any commitments or obligations called for in the contract or "agreement."
5. To acquaint the client promptly with problems arising in fulfilling such terms and attempt to work out a solution.	Client: To acquaint the evaluator promptly with problems associated with the program that may affect the evaluation effort; to work with the evaluator in attempting to solve any mutual problems that arise.

*Definitions used in the presentation:

Program - institution, organization, activities, and/or materials with an education/training function.

Evaluator - person(s) or agency with major responsibility for planning, carrying out, and reporting evaluation activities (see Table 1). May be independent or dependent (see Table 3).

Client - person(s) or agency with major responsibility for securing the services of an evaluator.

Participants - administrators, instructors, students, and other persons with a role in the program being evaluated.

Secondary Evaluator - person(s) or agency engaging in critical review of evaluation activities. May include reanalysis of previously collected data.

Table 7 (continued)

Evaluator to Client, Participants, Public, and Profession	Client, Participants, and Secondary Evaluator to Evaluator
6. To adhere to relevent professional/ legal standards and ehtnics in the conduct of the evaluation, including appropriate provisions for privacy and informed consent of participants and confidentiality of data.	Client: To support the evaluator's adherence to relevant professional/legal standards and ethics in the conduct of the evaluation.
7. To carry out data collection and other evaluation activities with as little interference as practicable with the operation of the program.	Client: To encourage full and honest cooperation by program participants in supplying data needed for the evaluation effort. Participants: To cooperate in the data collection effort associated with the evaluation and to provide accurate information in response to legitimate requests.
8. To acquaint the client with any aspects of program philosophy or operation that do not appear to be ethically, legally, or professionally sound but are observed by the evaluator, even if such observation is not part of the evaluator's specific charge; in addition, to inform the appropriate authority if the evaluator obtains evidence of legal misconduct by the client.	Client: To recognize the evaluator's "amicus" role in noting ethical, legal, or professional problems associated with the program; to give serious consideration to the evaluator's observations in this area.
9. To acquaint the client, in advance of any response, with requests received by the evaluator from superordinate agencies for information (testimony, etc.) about the program or evaluation; to ascertain with the client whether such requests are valid; if so, to acquaint the client fully with the nature of the response.	Client: To advise the evaluator on the validity of requests for information from superordinate agencies.
10. To present a "balanced" report of results to the client in timely fashion and in a form usable to the client; to spell out limitations of the investigation, along with the evaluator's values and orientations that may bear on the conclusions.	Client: To discourage misinterpretation and misuse of the evaluation results.

Table 7 (continued)

Evaluator to Client, Participants, Public, and Profession	Client, Participants, and Secondary Evaluator to Evaluator
11. To reserve the right to publish rejoinders to any misinterpretation or misuse of the evaluation results by the client.	
12. To identify other groups that have a legitimate concern for the results of the evaluation and to make the results available to them.	Client: To advise the evaluator about groups that, to the client's knowledge, have a legitimate interest in the results of the evaluation; to encourage dissemination of results to such groups.
13. To allow interested professionals to examine the data produced by the evaluation, within the limitations of accepted standards for privacy, confidentiality, and informed consent related to the purposes for which the data were collected.	Secondary evaluator: To specify, at the time when permission is sought to review the evaluation data, the purposes of the secondary evaluation effort; to maintain professional and ethical standards in conducting the secondary evaluation, including honoring any relevant commitments to those who supplied the original data; to report in a professionally sound manner on the results of the secondary evaluation.
14. To publish rejoinders to any misinterpretation or misuse by the secondary evaluator of the original evaluation data or results.	
15. To share with professional colleagues and relevant agencies and institutions knowledge and opinion about educational and social processes derived from evaluation studies.	

Table 7 is divided into two columns. The first column lists some of the evaluator's principal responsibilities to the client, program participants, the public, and the profession of evaluation (if we may so designate it here). The second column lists some of the responsibilities of the client, program participants, and secondary evaluator to the evaluator. These terms are defined at the beginning of the table.

Virtually every statement in the table could be discussed at great length. Examples of noncompliance could be presented. Analogies with other disciplines could be drawn. We have decided not to do any of these things, because the statements themselves are what we want to draw attention to. There are, however, some generalizations that should be made:

. . .The evaluator's responsibilities go well beyond simply carrying out a competent investigation.

. . .The evaluator has the responsibility to say "No" if that is the ethical stance. It is no defense to say: "They made me do it."

. . .Evaluation processes should be as open as possible, consonant with the rights of participants and the smooth working of the program.

. . .For almost every statement of responsibility of the evaluator there is a complementary responsibility of some other person or group.

. . .Separate ethical standards are not suggested in all areas (e.g., with respect to protection of the rights of human subjects); evaluators should refer to accepted standards in related professions.

* * * * * * * * * *

In this paper we have drawn attention to a number of neglected issues in the practice of program evaluation and we have suggested some schemes to help reduce this neglect. Failure to attend to an issue is frequently a matter of not being reminded forcefully enough that it exists. We hope that the checklists and tables in this article will serve as reminders to evaluators and those they serve of the diverse purposes and general methods of evaluation; of types and sources of evidence associated with general methods of evaluation; of the importance of disseminating evaluation results and of some useful dissemination techniques; of the complex fiscal-administrative relationships that may obtain among funding agencies, program directors, and evaluators; of the professional predispositions and preferences of evaluators that may influence what they look at and how they look at it; of some of the competencies that evaluators need and that can serve as a basis for assessment (including self-assessment) and training of evaluators; and of the ethical responsibilities bound up in program evaluation. In short, it is our hope that this article will aid in the establishment of a systematic, scientific discipline.

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